(1). For 135° 50′ W., 59° 31′ N., the Sun nearly on the Meridian.

	h m s	
Totality begins	0 21 29·7	Local Mean Time.
,, ends	0 24 35·8	
∴ Duration	3 6·1	
Sun's Altitude	50°	

(2). For Denver, Colorado.

	h m s	
Totality begins	3 29 0·3	Denver M.T.
,, ends	3 31 46·8	
∴ Duration	2 46·5	
Sun's Altitude	42°	

(3). For Havannah, Cuba.

	h m s	
Totality begins	5 34 31·8	Havannah M.T.
,, ends	5 36 25·2	
∴ Duration	1 53·4	
Sun's Altitude	16°	

(4). For Port-au-Prince, Hayti.

	h m s	
Totality begins	6 18 46·1	Port-au-Prince M.T.
,, ends	6 20 10·1	
∴ Duration	1 24·0	
Sun's Altitude	4°	

The greatest duration of totality on the central line will be about $3^m\ 8^s$, and the mean semidiameter of the zone of totality in the United States about 51′.

I have carefully examined every part of the above calculation, a very necessary precaution when eclipse-work is undertaken by a single computer.

The Occultation of Uranus on Thursday, March 2, 1871.

By J. Maguire, Esq.

In the last Number of the *Monthly Notices* Captain Wm. Noble states a circumstance which leads him to doubt the accuracy of the time of disappearance of *Uranus*, as shown in page 452 of the *Nautical Almanac*. He says that returning at $14^h\ 5^m$ sidereal time to his Equatoreal which had been previously set upon *Uranus*, he found that the planet *had disappeared* two minutes before the predicted time. The times are as follows :—

	S.T. h m	M.T. h m
Disappearance	14 7	15 25
Reappearance.....	15 0	16 19

I have made a calculation of the time of disappearance which I find to be $15^h\,24^m\,43^s$, and this agrees well with the $15^h\,25^m$ of the *Nautical Almanac*, which rejects in the list of Occultations all subdivisions of the minute; but I find there is a difference in the time of reappearance—my calculation being $16^h\,18^m\,9^s$ against the *Nautical Almanac* $16^h\,19^m$, which it may be noticed is not the equivalent for $15^h\,0^m$ sidereal time.

If Captain Noble's observation was made at Maresfield, the mean time of disappearance there would be about $15^h\,25^m\,44^s$.

But how is the observation to be reconciled with the calculated time? Must we conclude that the tabulated places of the Moon or *Uranus* in the *Nautical Almanac* are wrong*—or with respect to the observation itself, may we not entertain a doubt as to the presence of some of the conditions which are essential to a good determination.

Norwich, 26 *April*, 1871.

On the First Comet of 1867. By J. R. Hind, F.R.S.

In No. 1639 of the *Astronomische Nachrichten*, Professor Winlock has given elliptic elements of the comet discovered at Marseilles by M. Stephan, in January 1867, calculated by Mr. Searle, of Harvard Observatory, Cambridge, U. S., in which the period of revolution is 33·62 years. These elements are stated to represent closely the observations taken with the great refractor of that observatory; and those who have had occasion to use the Harvard observations will be aware that they possess an extreme precision.

I have remarked in this orbit a very near approach to that of the planet *Uranus*, when the comet passes its descending node (5789 days before perihelion). At this point the comet's heliocentric ecliptical co-ordinates are

$$x = -3{\cdot}784730 \qquad y = -18{\cdot}763121 \qquad z = 0$$

and in this longitude the similar co-ordinates of *Uranus* are

$$x = -3{\cdot}784974 \qquad y = -18{\cdot}764332 \qquad z = -0{\cdot}023115$$

whence the distance between the two orbits is 0·02343 only; an approximation which appears to explain the cause of the actual form of the comet's orbit.

* It was noticed at the Meeting, that the existing Tables of *Uranus* (Bouvard's), from which the *Nautical Almanac* places are calculated, are confessedly inaccurate to an extent which quite accounts for the error.—Ed.